National Institute of Environmental Health Sciences

Managing the health effects of temperature in response to climate change: Challenges ahead

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Abstract:

BACKGROUND: Although many studies have shown that high temperatures are associated with an increased risk of mortality and morbidity, there has been little research on managing the process of planned adaptation to alleviate the health effects of heat events and climate change. In particular, economic evaluation of public health adaptation strategies has been largely absent from both the scientific literature and public policy discussion. OBJECTIVES: We examined how public health organizations should implement adaptation strategies and, second, how to improve the evidence base required to make an economic case for policies that will protect the public's health from heat events and climate change. DISCUSSION: Public health adaptation strategies to cope with heat events and climate change fall into two categories: reducing the heat exposure and managing the health risks. Strategies require a range of actions, including timely public health and medical advice, improvements to housing and urban planning, early warning systems, and assurance that health care and social systems are ready to act. Some of these actions are costly, and given scarce financial resources the implementation should be based on the cost-effectiveness analysis. Therefore, research is required not only on the temperature-related health costs, but also on the costs and benefits of adaptation options. The scientific community must ensure that the health co-benefits of climate change policies are recognized, understood, and quantified. CONCLUSIONS: The integration of climate change adaptation into current public health practice is needed to ensure the adaptation strategies increase future resilience. The economic evaluation of temperature-related health costs and public health adaptation strategies are particularly important for policy decisions.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3620746

Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Health Professional, Public

Early Warning System:

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Co-Benefit/Co–Harm (Adaption/Mitigation):

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact:

specification of health effect or disease related to climate change exposure

Morbidity/Mortality

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology:

type of model used or methodology development is a focus of resource

Cost/Economic

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type:

format or standard characteristic of resource

Research Article

Resilience:

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

Timescale:

time period studied

Short-Term (